

IN THE CLAIMS

What is claimed is:

1. (Currently Amended) A method comprising:

opening a number of nanotubes to create open-ended nanotube segments;

and

bringing a corresponding number of connector molecules into contact with the nanotube segments, each connector molecule providing first bonding sites capable of bonding with one end of the nanotube segments and a second bonding site[[s]] capable of bonding with a corresponding bonding site[[s]] of a plurality of other connector molecules, such that bonding occurs forming three-dimensional nanotube structures.
2. (Original) The method of claim 1 wherein the nanotubes are carbon nanotubes.
3. (Original) The method of claim 2 wherein the connector molecule is in the shape of a cone.

4. (Original) The method of claim 3 wherein the base of the cone is comprised of a ring of atoms capable of binding to an edge of an open-ended nanotube segment.
5. (Original) The method of claim 3 wherein the point of the cone is comprised of a single point atom capable of binding with a corresponding point atom of each of two or more other connector molecules.
6. (Original) The method of claim 2 further comprising:
allowing bonding to occur; and
filtering at least some of any misbonded nanotube segments or connector molecules.
7. (Original) The method of claim 6 further comprising:
mixing the three-dimensional nanotube structures with a polymer matrix material to form a composite polymer material.
8. (Original) The method of claim 6 further comprising:
forming a heat dissipation device from the composite polymer material.

9. (Original) The method of claim 8 wherein the heat dissipation device is a heat dissipation device selected from the group consisting of a microchannel device, a cold plate, an integrated heat spreader, and a heat sink.

10. (Original) The method of claim 8 wherein a method of forming the heat dissipation device is selected from the group consisting of molding, casting, and extruding.

11-27. (Cancelled)

28. (New) A method comprising:

bringing a number of connector molecules into contact with a number of open-ended nanotube segments, each of said connector molecules providing a plurality of first bonding sites capable of bonding with one end of said nanotube segments and a second bonding site capable of bonding with a corresponding bonding site of a plurality of other connector molecules, such that bonding occurs forming three-dimensional nanotube structures.

29. (New) The method of claim 28 further comprising: exposing a number of nanotubes to nitric acid to form said number of open-ended nanotube segments.

30. (New) The method of claim 28,

wherein said first bonding sites are base rings of sulfur atoms, and said second bonding site is a carbon atom; and

forming said three-dimensional nanotube structures comprises bonding said base rings of sulfur atoms to open ends of said nanotube structures, and bonding said carbon atom of said connector molecule with a plurality of corresponding carbon atoms of a plurality of other connector molecules.

31. (New) The method of claim 30 further comprising:

filtering at least some of any misbonded nanotube segments or connector molecules.